

IN THE CLAIMS:

Please AMEND the claims as follows:

1. (CURRENTLY AMENDED) An optical device, comprising:

a substrate having a first surface and a second surface, wherein said substrate is fixed via the first surface to a fixing material having substantially the same thermal expansion coefficient as the substrate;

a first multi-layer film formed on the first surface of the substrate;

a second multi-layer film formed on the second surface of the substrate; and

a stress correction film formed on the second ~~surface~~multi-layer film, correcting distortion of the substrate due to a difference in stress between the first and second multi-layer films formed on the first and second surfaces, respectively.

2. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein

said stress correction film is transparent to light with a specific wavelength, and the optical film thickness is an integral multiple of one half of the specific wavelength.

3. (ORIGINAL) The optical device according to claim 1, wherein

said stress correction film is made of SiO₂.

4. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein

said stress correction film maintains profile irregularity of the substrate at a value of one wavelength or less.

5. (PREVIOUSLY PRESENTED) The optical device according to claim 1,

comprising:

a VIPA optical element further comprising:

said substrate being a plate transparent to light with a specific wavelength;

said first multi-layer film;

said second multi-layer film; and

said stress correction film maintaining the VIPA optical element substantially planar, and a mirror reflecting and returning the spectral components of light separated by the VIPA optical element to the VIPA optical element, wherein

a dispersion compensator is realized by using said VIPA optical element and said mirror.

6. (CANCELLED)

7. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said fixing material is made of transparent glass or semiconductor.

8. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said fixing material is made of opaque metal or ceramic.

9. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said fixing material is made of copper-tungsten alloy, Kovar alloy, alumina, or BeO.

10. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said substrate is fixed on said fixing material by organic adhesives, metallic soldering, or low melting point glass.

11. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said substrate is fixed on said fixing material at a plurality of points.

12. (PREVIOUSLY PRESENTED) The optical device according to claim 1, wherein said substrate is optically connected with said fixing material.

13. (PREVIOUSLY PRESENTED) The optical device according to claim 12, wherein the material of the optically connected surfaces is made of SiO₂.

14. (CURRENTLY AMENDED) A method for correcting distortion in an optical element, wherein the optical element includes a substrate having a first surface and a second surface, a first multi-layer film, a second multi-layer film, and a stress correction film, said method comprising:

fixing said substrate via the first surface to a fixing material having substantially the same thermal expansion coefficient as said substrate;

forming a first multi-layer film on the first surface of the substrate;

forming a second multi-layer film on the second surface of the substrate; and

forming a stress correction film on the second surfacemulti-layer film, correcting distortion

of the substrate due to a difference in stress between the first and second multi-layer films formed on the first and second surfaces, respectively.

15. (CURRENTLY AMENDED) An optical device, comprising:

a substrate having a first surface and a second surface, wherein said substrate is fixed via the first surface to a fixing material having substantially the same thermal expansion coefficient as the substrate;

a first film formed on the first surface of the substrate;

a second film formed on the second surface of the substrate; and

a stress correction film formed on the second ~~surface~~multi-layer film, correcting distortion of the substrate due to a difference in stress between the first and second films formed on the first and second surfaces, respectively.